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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/779,437	02/09/2001	Alfred A. Barney	01997-286001	6675

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EXAMINER
JAGAN, MIRELLYS

ART UNIT	PAPER NUMBER
2859	

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No.	Applicant(s)
	09/779,437	BARNEY ET AL.
	Examiner	**Art Unit**
	Mirellys Jagan	2859

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☐ The period for reply expires _____months from the mailing date of the final rejection.

b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
   - (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
   - (b) ☐ they raise the issue of new matter (see Note below);
   - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____.
3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a)☐ affidavit, b)☐ exhibit, or c)☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: *See Continuation Sheet*.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a)☐ will not be entered or b)☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: _____.

   Claim(s) objected to: _____.

   Claim(s) rejected: _____.

   Claim(s) withdrawn from consideration: _____.
8. ☐ The drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

Diego Gutierrez
Supervisory Patent Examiner
Technology Center 2800

Continuation of 5. does NOT place the application in condition for allowance because: Applicant's arguments that Huston fails to describe determining an unknown temperature directly from the emission intensity of light are not persuasive since Huston states that the relative peak heights and positions of the emission wavelengths from the thermoluminescent material can also be used to determine temperature (see column 13, line 63-column 14, line 2). The peak heights and positions of the emission wavelengths are representative of the emission intensity (see e.g., figures 1, 11, 12), and are used by Huston to 'directly determine temperature' since Huston does not disclose using any other parameters but the emission to determine the temperature.

Applicant's arguments that Huston fails to describe a temperature sensor as claimed in claim 15 because the examples referred to by the Examiner in the rejections describe the measurement of a fluorescence spectrum of a material and not a 'temperature sensor' are not persuasive since Huston discloses that the spectrums obtained, e.g., such as from the cited example, can be used to determine temperature as stated in the paragraph above. Furthermore, the recitation "A temperature sensor" in the preamble merely recites the intended use of a structure. In this case, structural limitations in the body of the claim do not depend on the preamble for completeness and are able to stand alone.

Applicant's arguments that Huston fails to describe a temperature-sensing 'coating' as claimed in claim 24 are not persuasive since Huston discloses a matrix on the surface of a substrate, the matrix comprising a semiconductor nanocrystal in a binder, as stated in paragraph 2 of the Office action. In this case, the body of the claim does not depend on the preamble for completeness but, instead, the structural limitations are able to stand alone. It appears that the features upon which applicant relies, i.e., the particular structure or description of the matrix, are not recited in the body of the rejected claims. Furthermore, Applicant's arguments that Huston fails to describe a 'temperature-sensing coating', i.e., does not measure temperature, are not persuasive as stated in the first paragraph above.

Furthermore, Applicant's argument that there is no suggestion to combine the references because Bawendi does not discuss thermoluminescence, using the nanocrystals for exposure to ionizing radiation, and the light emission from the nanocrystals being temperature-dependent, and because neither Huston nor Bawendi disclose determining an unknown temperature, i.e., Huston and Bawendi are not analogous art, are not persuasive since Huston teaches using a Group II-VI semiconductor nanocrystal for exposure to ionizing radiation, wherein the luminescence from the nanocrystals is temperature-dependent and can be also be used for measuring temperature (see column 10, lines 39-43; and column 13, line 65-column 14, line 5), and Bawendi teaches making Group II-VI semiconductor nanocrystals that exhibit high luminescence. In this case, the teaching, suggestion, and motivation to combine the references is found in the references themselves since Huston discloses using the luminescence of a Group II-VI semiconductor nanocrystal for determining exposure to ionizing radiation and temperature, and Bawendi discloses Group II-VI semiconductor nanocrystals that exhibit higher luminescence. A person having ordinary skill in the art would be motivated to combine Huston and Bawendi in order to provide the device of Huston with a Group II-VI semiconductor nanocrystals that exhibits higher luminescence. Furthermore, both Huston and Bawendi are in the field of applicant's endeavor, i.e., semiconductor nanocrystals. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

Applicant's arguments that there is no motivation to combine Gouterman, Huston, and Bawendi because Huston teaches sensing ionizing radiation and fails to teach using semiconductor nanocrystals to measure temperature are not persuasive for the reasons stated in the first paragraph above. Furthermore, Applicant's arguments that the temperature-dependent sensor used by Gouterman is not used to determine temperature but to eliminate the effect of temperature variations on pressure measurements are not persuasive since a temperature measurement is obtained from the emission of the temperature-dependent sensor (see column 11, lines 18-22) in order to correct the intensity of the luminescence of the pressure-sensitive sensor.

In addition, Applicant's arguments that there is no reason to combine Gouterman with Bawendi or Huston with Bawendi because Bawendi does not teach or suggest the nanocrystal having a temperature-dependent property and because there is no reason to combine Bawendi's nanocrystals with Huston's thermoluminescent material are not persuasive since the rejections are based on the luminescent properties of the nanocrystals of Bawendi, and since the rejections are not based on modifying Bawendi's nanocrystals with Huston's thermoluminescent material.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See In re McLaughlin, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, the examiner's conclusion of obviousness is based only on the prior art stated in the specification, i.e., that paints typically contain polymers or prepolymers, which is knowledge which was within the level of ordinary skill at the time the claimed invention was made..